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Voluntary financial disclosure, introduction of IFRS and the setting of a communication policy: An empirical test on SBF French firms using a publication score

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Abstract

A publication score of voluntary disclosed information disclosed by French firms was built on the 2003-2007 period. This original set of data is used to analyze the impact of the introduction of IFRS standards scheduled in 2005. It is also used to identify the determinants of communication policies set by listed firms. The publication score, for some firms and not all of them, outlines that useful qualitative information is brought to the market. Particularly, we show that highly communicant firms will reduce the information asymmetry as measured by the dispersion of analysts' forecasts of earning.

Keywords: publication score, voluntary disclosure, financial communication, information policy, IFRS introduction

JEL: M40, M41

Introduction

The IFRS (International Financial Reporting Standards) were introduced in 2005 for European listed firms. These standards should have a fundamental role in the clarification of the financial information broadcasted by companies, as far as they aim more particularly at creating a common accounting base allowing a better legibility of the companies accounting documents. The goal of the IFRS standards is to develop the content and the informativeness of the shared data.

Voluntary financial disclosure refers to additional information delivered by firms beside the mandatory information. It underlines a designed behaviour as far as the content of information matters and as far as the firms follows a policy. The intents are important and should be in accordance with goals. We analyzed voluntary disclosure as a tool of an existing communication policy. The strength and the importance of this policy are analyzed using an individual score of voluntary disclosure. This paper presents the methodology and the results of individual quantitative scores for French firms over the 2002-2007 period, which comprises the IFRS introduction in 2005. Moreover, we question the quality of the disclosed information by looking at its effect on analysts' forecasts dispersion. If the delivered information is useful, analysts will exploit it and converge more easily toward a forecast consensus.

The paper shows that a communication policy is designed by firms, more precisely or some of them. They set up a policy and follow it in a long term perspective. We do not evidence a simple negative and mechanical relationship linking analysts' forecasts dispersion and the publication score we built. In 2005, year of IFRS introduction in the European Union in 2005 does not introduce a global breakdown in the voluntary disclosure. In some situation, for weakly communicative firms, the score does not help to enrich forecasts. The delivered information here is a pure noise. In other situations, i.e. considering highly communicative firms, the score impacts negatively the dispersion of forecasts and helps to reduce information asymmetry. It leads to question the communication policy in terms of trustfulness and to introduce a reputational effect, qualifying the voluntary delivered information.

The empirical study will also confirm that the disclosure of voluntary information reduces selectively the asymmetry of information in the financial market. The complexity of a communication policy appears as far as it should be identified globally within a dynamic process. We show that a difference should be introduced between highly communicant firms and the others. The persistence of the communication characteristics underlines its time dimension.

The paper is structured classically as a first section reviews the literature. A second section will present the score of voluntary disclosure which is the genuine proxy of a quantitative communication. The third section sets the hypothesis and the last one presents the empirical results. A conclusion follows.

1- Review of literature

Financial communication answers legal or statutory obligations, and aims at increasing the visibility and the valuation of a company vis-à-vis a target public (Leger, 2008). A definition with regard to mandatory standards was proposed earlier by Depoers (2000) who introduced a difference between financial communication and financial information. She defines financial information as all the legal obligations of publications; thus financial communication constitutes then "a space of freedom, a room for discretionary choices, which the manager can exploit to modify the accounting image of his company ". Gabteni (2009) chose to consider the financial communication as any strategic behaviour of information transmission of an issuing company to all stakeholders. Following Depoers, she considers the set of financial information as comprising the legal, but also statutory and normative obligations of information publications.

The idea of information quality refers to the capacity to reproduce a reality in a way which is not biased, either by the perception and the judgments of the transmitter, or by the form which makes understandable this reality (Michaïlesco, 2009). The accounting and financial information quality is also defined in the abstract frame of the Financial Accounting Standards Board (FASB), which specifies that accounting information has a good quality

since it meets the relevance, reliability, comprehensibility and comparability conditions. Besides, we should also notice the constant evolution of the financial information standards in many countries, particularly in France. Indeed, it would seem that it is harder and harder to distinguish what depends on financial information and what depends on financial communication. De Bruin (1999) or Léger (2008) agree on the fact that the frontier between these two notions is hardly perceptible.

Watts and Zimmerman (1978) were interested in the determination of accounting standards and more specifically in pressures leading to the development of such standards. It encompasses the consequences of accounting standards on the resource allocation. Specifically, Watts and Zimmerman showed that managers tended to put pressure on politicians to ensure that standards are adopted to help reduce their political visibility, which is correlated with the emergence of political costs. Indeed, companies may have to face the risks of negative wealth transfers or to bear the costs of adjustment or transition to new standards. Consequently, IFRS accounting standards develops greater transparency in the financial statements and better comparability of accounts between companies. As a consequence, firms will become more politically visible and therefore more exposed to potential political costs. One way to overcome this increased exposure could be to increase the information voluntary disclosure to curb the outside image of the firm. Voluntary disclosure can then be described as a strategic behaviour in the sense of Waterhouse, Gibbins and Richardson (1990). The voluntary publication, understood as a strategic behaviour, implies the three following conditions:

- There is a network composed of at least two actors and information is distributed asymmetrically. One of the two actors is the manager of the firm while the second may be an investor, a competitor, a regulator or a pressure group. Among these two actors, one can decide whether to disclose financial information he holds.

- There is a communication channel between the two actors. The key questions will be to consider whether the use of this channel and the nature of information to be transmitted via this channel.

- The players' rewards are interdependent and conditioned by disclosures.

The task of a financial regulatory authority or of regulation rules is to efficiently solve agency conflicts which may arise between investors and managers (Healy and Palepu, 2001). So, we can question the ability of IFRS to reduce information asymmetry among firms.

Several studies have investigates this last issue and confirmed the hypothesis that financial publication regulation provides investors with new and relevant information (Hope, 2003a).

One of the main challenges to financial communication, understood as a strategic decision, refers to the reduction of the information asymmetries existing between the firm and its stakeholders. Alphonse and Hallot-Gauquié (2003) have shown that on the French market, the meetings of listed companies with financial analysts were followed by a significant decrease in information asymmetry. Similarly, Healy and Palepu (2001) outline theoretical reasons why disclosures may mitigate the agency problems in the firm. They consider that disclosures will enable to capture potential informative and incentive problems which may exist between managers and investors. Managers are encouraged to follow a disclosure strategy when they intend to make an issue in the market and to reduce the external financing cost of their company. So, one of the leading motivations of listed companies engaged in a strategic disclosure process is reduction of information asymmetry and reduction of their cost of capital.

Other studies confirm the link between voluntary disclosure practices and public offering of assets (Lang and Lundholm, 1993 and 1997, Healy et al., 1999). Managers will disclose more strongly in the period before the proposed public offering, and this, in order to reduce information asymmetry, which would be likely to generate a market misperception of the signal constituting the proposed public offering (Leland and Pyle 1977, Myers and Majluf 1984). Botosan (1997) investigated the link between disclosure level and cost of capital. One of the main outcomes is that a high level of publications generates a lower cost of capital for a sample of firms followed by relatively few analysts. Conversely, firms followed by many analysts do not show a significant relationship between the disclosure level and the cost of capital. Botosan and Plumlee (2002) considered the relationship between the cost of capital and three possible categories of publications: the annual report, quarterly report and other publications. They found that there was a negative relationship between capital cost and level of publications in the annual report. Conversely, there is a positive relationship between the cost of capital and disclosure level in the more regular reports such as quarterly reports.

The signal theory brings about a new question: even if the disclosed information would be shared by all, it is nevertheless not necessarily perceived by all in the same way. Verrecchia (1983) showed that the existence of publication costs was an explanation of the

managers discretionary, despite the fact that their partners have rational expectations about their motivations. The firm's investors are aware of the existence but not the content of information possessed by the manager. Indeed, the manager's decision to withhold information will depend more precisely on the manner in which its partners will interpret the absence of information while forecasts partners on the information content unpublished depend on leader motivations to restrain it. Thus, the manager may publish or "hold" the information he has; this decision is a signal for the asset value. However, disclosure of information held by the manager will reduce the assets future value in the sense that there is a disclosure cost. Verrechia (1983) states that the cost of publication may be of two distinct natures, it may well be direct or indirect: direct costs are related to the preparation, verification and dissemination of information, while indirect costs known as the proprietary costs are constituted of all the risks incurred by the company because of the publication of such information (increased competition, increased political visibility ... etc ...). Verrechia (1983) outlines that firms prefer to publish only favourable information which makes the firm value increase. A constant disclosure cost (proprietary cost) exists and only managers of firms of which level of information exceeds a certain threshold, will disclose new information. The uninformed investors are unable to distinguish between firms. They are in a position where they do not know if the firm hides or not bad news. Similarly, Dye (1985) postulates that investors have no certainty about the managers detention of private information, they can not interpret the absence of information as a sign of withholding bad news by the firm in question. Verrechia and Dye's research leads to the conclusion that managers disclose only the good news, bad news being disclosed only if the disclosure cost is low enough or if the information asymmetry between the firm and its investors is sufficiently high.

The voluntary disclosure theory was initiated by Verrechia (2001). His work was motivated by the fact that voluntary disclosure is an « eclectic » study subject which borrows from three distinct approaches that are accounting, finance and economics. Verrechia proposed to identify three avenues of research:

(i). The first field of research is constituted by works which the main objective is to analyze the consequences of disclosure on investors' behavior and more precisely through the reactions of stock prices and trading volumes. This first field of research is called "association-based disclosure". More specifically, studies enrolling in this line of research have focused on two specific relationships: the relationship between the publication of information and changes in stock prices and the relationship between

the publication of information and changes volumes of shares traded.
(ii) “The discretionary-based disclosure approach "identifies studies suggesting that if the managers’ objective is maximizing the market value of the firm and that there are costs of publishing information, then there is a balance in which information which is reflected by an increase in market value of the firm is released.
(iii) The third and final line of research revealed by Verrechia includes work on the study of disclosure categories which are preferred in the absence of an informational previous knowledge. This third line of research is called "efficiency-based disclosure. More specifically, work on the efficiency-based disclosure focused on a possible link between disclosure and information asymmetry reduction. Diamond and Verrechia (1991) and Kim and Verrechia (1994), state that voluntary disclosure reduces information asymmetries between the informed investors and the uninformed ones.

Francis, Khurana and Pereira (2005) analyzed the relationship between voluntary disclosure and cost of capital reduction. Previous works (Healy and Palepu, 2001; Verrechia, 2001) on the subject have highlighted the relationship that disclosure tended to reduce adverse selection costs, through the reduction of the information asymmetry between managers and outside investors. Francis et al. (2005) state that all studies on the relationship which may exist between additional information disclosure and the cost of capital reduction have been conducted on the U.S. market that has the specificity of highly protect investors (La Porta et al. 1998) and easy access to external financing. Considering that the results found on the U.S. market may be extended to markets with different legal and financial systems, the authors analyzed whether a disclosure policy could reduce information asymmetries in institutional environments distinct of the U.S. market in terms of investor protection or financial market development. They considered a sample of 672 observations conducted across 34 countries with different financial and legal systems. It is showed that all companies in the sample showed high disclosure levels since they were part of a sector with high financing needs and, on the other hand, that active companies in terms of disclosure benefited from low equity and debt costs.

The La Porta et al.’s analysis underlines the role of investors’ protection. In a dispersed ownership context such as the USA, Baek et al (2009) show that the share ownership does not influence financial communication as measured by the S&P transparency Index. Results are similar in other countries even where ownership is more concentrated:

Singapore (Eng et Mak, 2003) or Canada (Ben-Amar and Benjenoui, 2008). However, in France a negative link is identified between a concentrated capital ownership and the quality of financial communication (Labelle and Schatt, 2005; Lakhal, 2006; Ben Ali, 2008). Institutional investors may also influence the financial communication of the firm. Healy et al (1999), Bushee and Noe (2000) or Beak et al. (2009) highlight a positive relationship between institutional investor's ownership and financial disclosure or transparency of firms in an Anglo-Saxon context. In France, the empirical results are mitigated: positive for Lakhal (2006) or insignificant for Ben Ali (2008, 2009).

2 - The construction of a publication score

The context of the paper is the balance between a macro exogenously norm (the mandatory standards) and the micro idiosyncratic behaviours of delivering genuine information to a specific stakeholder of the firm, namely financial investors. We need first to build a publication score.

a) Methodology and previous studies

The first score methodology used to quantify voluntary publication of financial information by firms was conducted by Cerf in 1961 in the U.S. market. He looked at the annual reports of 25 companies listed on the New York Stock Exchange (NYSE) and showed that the voluntary disclosure of information was positively associated with firm size, number of shareholders, and its profitability level. In 1971, Singhvi and Desai studied information disclosed in annual reports of U.S. firms by calculating a score index constituted by 34 voluntary disclosure items, inspired by Cerf study. The results obtained confirm the size, the number of shareholders and profitability as voluntary disclosure determinants. Buzby (1974) offers an analysis of 88 US firms' annual reports during the year 1971. He built a list of 38 items of financial and non financial disclosure supposed to be disclosed in annual reports of entities considered. The relative importance of each of the 38 items was determined by a preliminary survey using questionnaires to financial analysts. Many authors (Cerf, 1961; Singhvi and Desai, 1971; Buzby, 1975; Stanga, 1976; McNally, Eng and Hasseldine, 1982) addressed the question of weighting items. The results of Buzby after the analyse of the

content of 88 US firms annual reports shows a low correlation between the item utility recognized by financial analysts and it publication by firms under study. In other words, the information disclosed by the companies is uncorrelated with user expectations.

Tables 1 and 2 presented below provide an overview of the literature related to voluntary disclosures scores made respectively in the U.S. and in the international markets.

INSERT TABLE 1

INSERT TABLE 2

b) Design of a score of voluntary disclosure of French firms in pre/post IFRS period

The approach implemented during the construction of a voluntary disclosure score is to identify from law, accounting standards and the current financial regulation, a series of items called "optional", that is to say which publication is not mandatory. Once the list of voluntary information established, the researcher will be able to compare the latter to the various annual reports that he has chosen to analyze. The content analysis and implementation will allow the researcher to perform the calculation of a voluntary disclosure score.

Common to all these studies, either American or European is that the annual report remains the fundamental document for calculating the voluntary disclosure score. Bertrand (2000) explains the primacy of the annual report by the fact that it is a central source of information and that it is easily available and so accessible. The vast majority of studies on the quality or scope of information, these scores were calculated based on one year and therefore the study of a single annual report. The study we propose to implement deals with the voluntary disclosure strategies of SBF120 listed companies during the years 2003, 2004, 2005, 2006 and 2007. The choice of study period is justified by the fact that we chose to

observe the financial communication strategy of SBF 120 companies in pre / post IFRS.A total of 325 annual reports (or, when relevant, the “document de reference” given to the French regulation body when a financial operation is issued) was considered. It involved the analysis of approximately 113 000 pages of documents

A further step is to set up the list of optional information items. The construction of the list of voluntary disclosed items to be crossed with the content of the annual reports is considered by the literature as a key-point. To proceed do it, we have to consider the informational context IAS-IFRS, we have chosen as a first step to identify all the lists used in the literature to the exclusion of lists developed in North America. These are presented in Table 3.

INSERT TABLE 3

Once the lists voluntary disclosure items outside North American context identified, we used the following selection criterion for each list item: indeed, according to literature (McNally, Eng and Hasseldine, 1982) a voluntary disclosure item is withheld when it appears in at least two lists. However, the lists presented in Table 3 have been developed in informational contexts different from the IFRS one. It seemed appropriate to consider the selected items one by one to check with regard to IFRS standard, to check if if we can still qualify them as voluntary disclosure items. To do this, we used as support audit FOCUSIFRS website, available at www.focusifrs.com. The latter was established jointly by the High Council of the Institute of Chartered Accountants and the national airline of auditors and identifies all texts relating to IFRS. Thus, after verification of the voluntary nature of each voluntary disclosure item, our optional items list if made of 28 voluntary disclosure items. When the information item is present in the annual report the value 1 is given (0 otherwise). As a result, each firm for each yea r is given an individual score ranging from 0 to 28.

INSERT TABLE 4

c). Sample

The sample is composed of listed companies belonging to the French SBF 120 index. Banks, finance companies and insurance were excluded as these entities are, by their activities, subject to specific informational requirements. The initial sample therefore consisted of 120 listed companies comprising in the SBF 120. Conducting a longitudinal study, we have excluded from our sample companies that we do not end up in the index over the five years of the study. Individual firms in the sample are present in the sample all along the considered time. The final sample then consists of 65 companies operating within the SBF 120 index during the years 2003, 2004, 2005, 2006 and 2007. Table 5 presented below gives the details.

INSERT TABLE 5

The selected study period is the interval pre / post the introduction of IFRS. We specifically chose to study the annual reports or reference documents of the 65 companies sample during the years 2003 and 2004 for the period prior to transition to IFRS and the years 2006 and 2007, for the period after the move to standards IFRS. It should be noted that the study of the transition to IFRS, the year 2005, was also performed. The research conducted consisted in comparing our voluntary item list to annual reports or reference documents of the 65 firms' sample. The content analysis focuses on the study of 325 annual reports or the so-called "document de reference" (reference document) of the SBF 120 companies, which are available on the website of the French Financial Markets Authority (AMF).

d). Results

The descriptive summary of the 325 annual reports or reference documents is presented in Table 6. This prompts a number of comments under which the companies in our sample have increased the volume of their voluntary disclosure during the period 2003-2006. Conversely, the results reflect a decline in this voluntary disclosure activity during the year 2007, two years after the official transition to IFRS.

INSERT TABLE 6

The figure 1 shows that an upward sloping voluntary disclosure score is. A trend is identified. However we do not know if the increase is due to the IFRS transition or if it can be explained by a historical and deterministic evolution, or by both. If an historical trend is effective, it finds its momentum before the year 2005, year of transition to the new accounting standards. The financial communication evolution of our sample firms maybe the result of two causes which are the transition to IFRS but also a historical trend of development. The global upward evolution is not monotonic. We are questioned by the decrease of the average score in 2007.

INSERT FIGURE 1

3- Hypothesis and models

Our goal is to study the changes through time of the quantity but also the structure of the financial information produced by a firm and used as a tool for financial communication, consecutive to a new normative frame. When looking at the financial communication of the French SBF 120 firms in pre/post IFRS periods, we will also question the determinants of the voluntary disclosure. One of the main goals of the IFRS standards was to clarify and to make more comparable and more transparent the published financial information intended to the various public of a firm. We wonder if the sole modification of a regulatory and normative framework is enough to modify the behaviour, often strategic, of financial communication of listed firms in terms of relevance, utility and thus quality of the delivered financial information. We question the existence of the communication policy strategically built by firms for idiosyncratic purposes.

The voluntary disclosure score is considered by the literature both as a score of quantity (Cooke, 1989; Barrett, 1976; Depoers, 2000) in that it allows a measure of voluntary disclosure, but also as a qualitative measure of the voluntarily disclosed information (Cerf, 1961; Singhvi and Desai, 1971, Lang and Lundholm, 1993). A voluntary disclosure score may have a dual aspect in that it may also measure the quality of the delivered information. This However, this hypothesis does not seem appropriate since a firm publishing more information does not necessarily publish information of highest quality

In figure 1, only average scores, i.e. average behaviours, are considered. A positive trend appears in voluntary disclosure. However the idea of a trend leads to the acceptance of a deterministic global pressure which pulls the firm upward in the quantity of delivered financial information. This is an idea of continuity in a long term evolution. An opposite explanation is that the IFRS setting in 2005 introduces a change of regime in the policy of disclosure. Considering globally the average 2003 and 2004 score and the 2006-2007 score, the test of difference between the two averages is significant (p=0.00). However these are two point observations and both explanations, between the change of disclosure regime due to IFRS and the deterministic long term evolution, can as well explain this difference. The first hypothesis is:

H1: The evolution in the quantitative score of disclosure is explained by an exogenous change dated by the introduction of IFRS than by a long term trend evolution.

The score is the result of a communication policy. It results from a firm's decision. It is set at the firm level and has a long term view. It is built in a long term framework. A firm that communicates strongly now, was also a communicating one in the past. We can hypothesize that visible firms will follow a voluntary communication policy. We can consider that big firms or member of the CAC 40 index are visible.

H2: The voluntary disclosure choice results from a long term policy and has an autoregressive component (a). Voluntary disclosure is positively linked with size. A large firm or one belonging to the CAC index is more prone to have a voluntary communication policy (b).

The need of information may also determine the importance of the voluntary disclosure policy. Outside pressure may be channelled by the leverage ratio or by the level of risk. The firm may disclosure information to issue a signal to investors and the market considered globally. We expect here a negative sign between the score index and the leverage ratio or the market level of risk.

A dynamic relationship makes the firm to answer also to the pressure of financial analysts. The size of the asymmetry of information makes the firm issuing voluntary information to analysts. The asymmetry of information may be measured by the dispersion of forecasts along in the year.

H3. The publication score index is negatively linked with leverage and the level of financial risk (a). It is positively linked with the previous dispersion of forecasts (b).

The dispersion of analysts' forecasts should be influenced by the score. The delivered voluntary information is useful for analysts and helps to reduce the asymmetry of information. The alternative hypothesis is that the score of publication covers information which is noisy or useless.

H4. With useful disclosed information, the dispersion of forecasts should be negatively linked with the score index.

However the previous hypothesis does not introduce any difference in behaviour. We can have sub-groups of firms. Some of them may be highly communicant and reliable as a result of a trustful communication policy. Others may follow weak or non reliable communication policy. When they issue voluntary information, it may have no impact on the asymmetry of information

H5. The existing of communication policy may result in different reactions in the market's asymmetry of information.

The explained variable is the individual score, SCORE. We divided the sample in two parts to separate communicant firms and non-communicant ones. The first are those with a voluntary publication score above the median. We identify them as those involved in a

communication policy. The COMDUM is a dummy variable. The cross interaction term SCORE*COMDUM gives the score value for only communicant firms. On the analysts' side, we consider the dispersion of forecast earnings (DISP), the number of analysts issuing a forecast (ANALYSTS) and the mean accuracy of earning forecasts (ACCUR). Looking at the DISP variable, outliers with a value above 5 were filtered out.

Usual control variables are considered. The market risk of the firm (RISK) is measured by its beta coefficient. Market risk is preferred here because we want to focus on the consequence of information communication directed toward investors and the financial market. Capital ownership structure is integrated through the institutional investors' ownership (INSTOWN) and the percentage of capital held by the three major shareholders (TOP3). Outliers have been removed (3 observations). The size of the firm (SIZE) and the debt leverage (LEVERAGE) were also referred to. A dummy CAC variable is used to flag firms of which stocks are members of the prestigious CAC 40 index. A trend variable (TREND) was created using the 5 years. A dummy IFRS is added with 0 before IFRS enforcement, i.e. 2003 and 2004, and 1 after.

INSERT TABLE 7

INSERT TABLE 8

A first look at the data is to consider them as randomly distributed in the time dimension. We may see them as a set of independent observations to get a first insight in the explaining variables of the SCORE value. We do not input any preset time dimension in the data to explain the score. We integrate a time dimension only by imputing as explaining variable either the TREND variable or the dummy IFRS.

Using an ordered logit model which suits to the structure of the score values, we get a better fit. The model is highly significant. We use as control variables, dispersion, size, number of analyst, leverage, equity ownership by institutional, ownership concentration,

forecast accuracy and market risk. Both coefficients of the TREND and IFRS variables are significant. They have the expected sign of an increase of the score index with time. However we cannot discriminate between the two. We do not consider the sign of other variable here because this model is not suitable. All we can say is that the randomly structured data have a significant time dimension. Using a non panel model will be mistaken.

INSERT TABLE 9

From that point, the empirical study will use panel analysis. A test to confirm individual effect between the 62 firms and a time effect between the 5 years was performed. The SCORE variable has a panel data structure. The DISP variable also has, but only if we consider a firm's effect.

INSERT TABLE 10

4 Empirical results

a) Determinants of the SCORE variable

We used a panel regression analysis with individual effect. We model explicitly the time effect by considering either the TREND or the IFRS variable. This way allows questioning the nature of the time effect. Allowing a time effect in the panel model would introduce dummies for each of the 5 considered years. Doing so, we would not have been in a position to statute on the nature of the time effect, i.e. deterministic trend or pre/post IFRS decision. To set up the model we have to choose between fixed (intercept) effect and random effect. We used random effect in a first trial because it is the less constrained model. Then after, we will test the final specification against a fixed effect intercept using a Hausman's test.

The M1 and M2 regression includes all explaining variables; they only differ by the time dimension modelled with TREND or with IFRS variables. The former is not significant although the latter is. The M3 and M4 regressions are restricted to some explicatives: SIZE, LEVERAGE, SCORE(-1), CAC, INSTOWN and ACCUR. They differ only with regard to the TREND and the IFRS variables. We get the same result in favour of the IFRS variable. Apparently, this leads to support the hypothesis of a significant change in the regime of communication policy with the introduction of the IFRS standards in France in 2005.

The strongest significant variable in the explicatives is SCORE(-1), i.e. the previous value of the score index. Autoregressive scores confirm a long term communication policy. A highly communicant firm will stay highly communicant the following year. The status of the firm explains the importance of voluntary disclosure. The SIZE variable is not significant, but the Cac stock index membership is.

Variables linked with the financial riskyness of the firm are not very conclusive. The level of market risk, as featured by the beta, is not significant, and the leverage explains disclosure but only at a low 10% level. The ownership structure variables (TOP3, INSTOWN) do not have any influence on the setting of the communication policy. The asymmetry of information does not appear as a determinant, neither the forecast accuracy, the number of analysts nor the past dispersion, are significant. Introducing previous value of the asymmetry of information does not appear useful. The DISP variable lagged one period is not significant.

INSERT TABLE 11 Determinants of the Score index

(Variables see table 1; Panel analysis with random effects except equation (8) with fixed effect)

The final M8 model explaining the score is then tested in a fixed or random form. The fixed setting estimates a specific intercept for each firm. The Hausman test rejects the fixed intercept coefficient at the 5% level (F: 2,12; p-value:0,062). The beta coefficients are not significantly different, so we will prefer the less constrained model, i.e. the random effect one. When looking at the fixed effect estimates, we find similar results although less significant. It means that the firm’s communication policy is peculiar to it and has a strong permanent form.

This single equation panel does not strongly identify any idiosyncratic determinants at this level (except the global role of IFRS setting). The communication policy and the value of the score are similar to an exogenous data belonging to the firm. One reason for that poor result in explicative variable is that the score level is endogenous, but badly modelised. It will be seen then after.

b) Analysis of the analyst's forecasts dispersion.

Here we analyse the DISP variable which is a proxy of information asymmetry as perceived by analysts. We introduce a dummy COMDUM for highly communicative firms (1), opposed to moderately communicating firms (0). The idea is to separate highly communicant and moderately communicant firms. The first analysis of the previous score variable SCORE(-1) shows a non significant sign. The mechanical information-providing mechanism is not confirmed: Communication policy does not seem to be based on a positive reaction of the market to the offer policy of the firm. The disclosure of information does not seem to reduce directly the asymmetry of information (equations 1, 2 and 7). This point does not confirm our offer-demand scheme. It does not mean that the firm does not provide any information to the market to reduce asymmetry of information. It could mean that the information provided by the firm, even in increasing quantity, is not useful to the market. We reject the idea that the quantity of information is linked with its quality for any firms in the market. Information may be pure noise or useless because it does not reduce the analysts' dispersion of forecasts.

The CONDUM variable is significant. It means that the market is sensitive to the communication policy of certain firms but not all. Those who are globally good communicant and which provide a large set of voluntary information will be identified and the market reaction to their communication policy will be good, i.e. asymmetry of information will shrink. Those who are moderately communicant, have a small influence on the market's perception. The voluntary information they disclose may be considered as noise. We find result which may corroborate the idea that reliability and confidence are filters with regard to the disclosure of voluntary of quantitative information.

Some results are common with the literature: Analysts' dispersion is a negative function of the number of analysts. Belonging to the CAC index enhances dispersion. The size variable influences negatively the dispersion, which confirms the hypothesis of increasing complexity and opacity of large companies. Leverage indicates risky companies that may be more complex to analyze, so it is linked with larger dispersion of earnings. Interestingly the IFRS variable is not significant. The introduction of IFRS does not reduce significantly the asymmetry of information. The DISP variable with a lag of one period appears significant at equation (7). It underlines the fact that the dispersion of forecasts may be auto-correlated and has some persistence.

INSERT TABLE 12

The significant SCORE variable with a positive sign in equation (3) and (8) may seem opposite to intuition. It will suggest that the delivery of financial information increases the analyst's dispersion of forecasts. However, we have to consider that the sign of SCORE is balanced by a significant negative sign of the interaction variable SCORE*COMDUM. (equations 3, 4 7 and 8). We crossed the dummy COMDUM with the score level. The idea is to identify the amount of voluntary disclosure by highly communicating firms. The negative sign of this variable means that the delivery of information by communicant firms impacts negatively the dispersion of forecasts and reduces the market asymmetry of information.

The final model in equation (8) has been set up with a random and a fixed effect. We have to test the specification between fixed and random effects. The Hausman F test reject the fixed effect form (F: 0,80; p-value: 0,61). It confirms that the estimated coefficients are not different and we will privilege the less constraint form. The result for this univariate equation is confusing as it appears that the SCORE variable influence is positively linked with DISP. Ceteris paribus, it will give the idea that increasing voluntary information enhances the asymmetry of information. The hypothesis that the extra information is pure noise is not explicitly rejected.

The direct relationship between the current score and the market asymmetry of information is positive. Looking at the cross variable, the relationship turns negative. We cannot statute. At least, it seems that the behaviour is not homogeneous between firms.

c) Endogeneity and system of equations

The second model evidences that asymmetry of information (DISP) is influenced by a complex mix of determinants. It refers to the SCORE at time t which is parallel to the DISP measure. However the SCORE value at year t is issued at the beginning of the following year. But firms issued voluntary data all the year over. The first equation explaining the score value shows that the previous SCORE at time t-1 is a good help in forecasting the issue of voluntary information disclosure. Considering SCORE(t-1) the market and analysts will know that the firm will still continue to communicate above the required set of information. Both DISP and SCORE have endogenous relationship and we have to take it into account in the empirical modelling through simultaneous equations.

We estimate jointly the two equations. First is the score equation, second is the dispersion of forecasts equation. The first equation expresses the offer of information by the firm. It has to do with his communication policy. The second one is the resulting level of asymmetry by the market participants.

Looking at the first equation it still depends on the previous SCORE value and is not linked with leverage, nor IFRS. The new score value is nearly 70% of the previous one. The analyst's dispersion of forecasts which is a proxy of the information asymmetry between shows the same determinants as previously identified.

INSERT TABLE 13

Size is positively linked with asymmetry. Paradoxically, a higher size adds complexity. Also the number of analysts implies a better consensus about the future forecast of earning. Firms' environment such as belonging to the Cac Index does not influence the asymmetry. The asymmetry of information has a time persistence dimension. It is autoregressive.

In the equation system, the explained DISP variable is no more influenced by the forecasted SCORE value. The coefficient becomes insignificant. A simple and one way relationship between the quantity of delivered information and the reduction of information asymmetry does not exist. We cannot validate simply the hypothesis that the quantity of "raw" information delivered globally to the market is useful information. From the investor's viewpoint, it may no help to analyze the firm. However, we have to separate firms between groups of highly communicative and moderately communicative firms. Considering the former, information may reduce the conflict of interest. But it may also add fuzziness and confusion in the market and does not reduce the asymmetry of information for the latter. Moreover the interaction variable is still significantly negative. It suggests that highly communicative firms will here reduce effectively the asymmetry of information by delivering voluntary information. A statute of trustworthy information creates values and is useful. It is issued by communicant firms within a policy framework. Information coming from moderately communicant firms has no impact. It does not reduce the asymmetry of information. This interaction variable influences negatively the dispersion. It means that the consensus of information is increasingly enhanced in the so-identified communicant firms of the sample. There the effect on the DISP value is stronger. Conversely, firm with low communication standards cannot impact the consensus on their earnings.

Other variables have sound signs: dispersion increases with leverage and size. It decreases with the number of analysts. Contrarily to previous results, there is no IFRS effect. Globally the new IFRS standard does not seem to directly increase the quantity of delivered information. This effect is indirect. The voluntary communication policy is devoted (among communicant firms) to the reduction of the asymmetry of information. A decline in asymmetry is reached through an improved score (for communicant firms). There is no global macro influence of the accounting rule on the idiosyncratic voluntary disclosure. Communication makes the communicant firms to disclose more. The aggregate value of the DISP variable decreased from 2.16 (2003-2004) to 0.36 (2006-2007); this is what explains the breakdown in publication scores.

The fact that the SCORE at time t influences DISP at time t is not paradoxical. We know that the annual report is delivered formally at the beginning of the following year t+1. The forecasts on the earning of the year are made during the course of year t before the end of

the fiscal year. The contradiction is only apparent. We measure the voluntary discloser using the annual report but it does not mean that the voluntary new information is disclosed only using the annual report as a medium. The communication policy makes this voluntary information disclosed continuously and throughout the year. The supplementary information is gathered in the annual report but it may be diffused to the market using other channels. This specific information may then influence contemporaneously the construction of forecasts by financial analysts.

The communication policy of French firms has a time dimension. It is built in a long term perspective. We saw a strong persistence in the level of the quantitative scores as well as in the level of asymmetry of information measured by the dispersion of earning forecasts. Communication is not limited to the delivery of quantitative pieces of information. Analysts (and the markets) will only react to useful information, i.e. the one that is trustable and issued by reliable highly communicant firms. Those firms have a long term reputation of communicant firms. Our sample covers only 5 years. The market process to filter out useful information issued by communicant firms in the framework of a global policy is the major conclusion we draw from this paper. It should be confirmed on a longer time period.

Conclusion

The paper has a twofold goal. It measured the voluntary disclosure of financial information through a quantitative proxy, called a publication score. This was previously done in France in 2005 by the “Observatoire de la communication financière” set up jointly by the stock Exchange Euronext, the CLIFF (French Association of Investor Relations), the SFAF (French Company of financial analysts), PricewaterhouseCoopers and Bredin Prat legal advisor. Gabteni (2009) choose to build and calculate a voluntary publication score in the pre/post IFRS context over a longer period. The publication scores values are very different trough time and between firms. The introduction of IFRS standards affected the voluntary disclosure of financial and non financial data measured through 28 items. The delivered information increased significantly after 2005. However, it seems to be explained more by the development of communication policies than by the introduction of IFRS.

The previous developments analyze the firms' voluntary disclosure behaviour. We chose to approach the financial communication of our sample of French firms through their voluntary marginal disclosure above the standard mandatory information obligation. We test the existence of financial communication policies followed by some of SBF 120 firms. The publication score was opposed to information asymmetry measures, i.e. the dispersion of earnings per share forecasts by financial analysts. A dynamic process of communication is evidenced in our empirical study. A distinction should be made between highly communicant firms following a long term policy and others. The introduction of IFRS standard does not directly improve the level of voluntary disclosure. Complex and idiosyncratic communication policies directed to the reduction of asymmetry of information is the main driver of the disclosure of financial information.

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Table 1. Summary of studies using disclosure scores on the U.S. market

Author	Year	Sample	Items	Comments
Cerf	1961	258 firms listed on NYSE	31	Postive relationship between disclosure and size, number of shareholder profitability
Singhvi and Desai	1971	100 firms listed on NYSE 55 unlisted firms	34	Firms issuing information correlated to user expectations (financial analysts) are audited by smaller audit firms, are less profitable, have more volatile prices than other firms.
Buzby	1974	44 firms listed on NYSE 44 unlisted firms	39	Existence of a weak correlation between the relative importance of the item and the level of disclosure
Buzby	1975	44 firms listed on NYSE 44 unlisted firms	39	Positive relationship between disclosures contained in the annual report and firm size. ack of relationship between disclosures and listing status
Stanga	1976	80 firms listed on NYSE	79	Positive relationship between disclosures contained in the annual Report and industrial firms in the sample study.
Garsombke	1979	100 firms listed on NYSE	34	Lack of relationship between disclosures contained in the annual report and the level of risk associated with the firm.

Table 2. Summary of research using disclosure scores on other markets (non US studies)

Source	Year	Sample	Number of items	Comments
Choi	1973	72 firm listed on European markets	36	The listing on a European financial market is generating improvements in the level of disclosure
Barrett	1976	15 US firms 15 Japanese firms 15 British firms 15 French firms 15 German firms 15 Swedish firms 13 Netherlands firms	17	The levels of disclosure in annual reports of American and British companies are significantly larger than those present in the annual reports of other companies in the study sample.
Firth	1978	250 CFOs 250 accountants working for audit firms 120 financial analysts 130 bankers	75	The purpose of this study was to test the importance placed by different users to different items of publication. The results show that CFOs and auditors give equal weight to items / financial analysts and bankers give equal weighting to the items.
Firth	1980	278 British manufacturing firms	48	The small firms significantly increase their level of publication in the issuance of new securities. This relationship does not hold for large firms
Firth	1984	100 British firms	48	The study results reflect the lack of significant relationship between the level of disclosure and systematic risk measured by beta.
Chow et Wong-Boren	1987	52 Mexican listed firms	24	The information voluntary disclosure level is higher for large firms than for small firms.
Cooke	1989a	38 Swedish unlisted firms 33 firms listed on Swedish market 19 companies listed both on the Swedish market and on at least one foreign market	224	There is a positive relationship between the voluntary disclosure extent and both listing status and firm size.

Cooke	1989b	38 unlisted Swedish firms 33 firms listed on the Swedish market 19 companies listed both on the Swedish market and on at least one foreign market	146	There is a positive relationship between voluntary disclosure extent and both listing status and firm size. Moreover, « commercial firms » publish less voluntary information than firms in other sectors.
Cooke	1991	48 firms listed on Japanese market	106	There is a positive relationship between the voluntary disclosure level and firm size.
Gray, Meek et Roberts	1995	58 U.S. companies and 32 British firms listed on both their domestic market and external market 58 U.S. companies and 32 British firms listed only on their domestic market	128	The firms listed on both the domestic and external markets present publication levels higher than the firms listed only on their domestic market.
Raffournier	1995	161 firms listed on the Swiss market	30	The level of disclosure is significantly correlated with firm size, degree of international openness, size of audit firms and to a lesser extent to the diffuse nature of ownership.
Hossain, Perera et Rahman	1995	55 companies listed on the New Zealand market	95	There is a positive relationship between the level of voluntary disclosure of firms studied and the size, debt level and external listing
Owusu-Ansah	1998	49 listed companies in Zimbabwe	214	The level of disclosure is positively correlated with size, profitability, shareholder structure.
Depoers	2000	102 listed companies in France	65	There is a positive relationship between the level of voluntary publication, size and external activities of firms.
Archambault et Archambault	2003	621 listed companies across 33 countries	85	Disclosure are influenced by three elements: culture (religion, education, individualism ...), national systems (freedom, press, inflation, financial markets ...) and systems company (shareholders, debt, dividends, listeners , size ...).
Eng et Mak	2003	158 companies listed in Singapore	84	Impact of ownership structure and composition of the board of directors on disclosure strategy.

Table 3. Lists of optional items used in the literature

Authors	Year	Country	Items number
Chau et Gray	2002	Hong-Kong	116
Myburgh	2001	South Africa	49
Depoers	2000	France	65
Hossain, Perera, Rahman	1995	New-Zealand	95
Raffournier	1995	Swisszerland	30
Cooke	1989	Sweden	146
Chow, Wong- Boren	1987	Mexico	24

Table 4 : List of 28 voluntary disclosure items

Items of voluntary disclosure	
1 Description of principal products / services - Market share	15 Return on shareholders' securities
2 Forecast profit year n +1 (qualitative)	16 Number of employees
3 Forecast profit year n+1 (quantitative)	17 Cash Ratio - Current Ratio
4 Future cash at horizon 2 to 5 years	18 Other financial ratios
5 Description of the major factories, warehouses and properties	19 Discussion on past industry tendencies
6 Biographical Profile of Directors and Officers (responsibilities, experience, courses)	20 Discussion on future industry tendencies
7 General objectives of the firm - Missions	21 Position and competitive environment
8 Description of marketing network for final goods and services	22 Policy and financial objectives
9 Main activity or affiliation of directors with other organizations	23 Transactions, currency exchanges with government
10 Information on the social responsibility of the firm	24 Firm history
11 Historical share price - Trend	25 Description of the organizational structure
12 Human Resources: Cost of training operations	26 Developing new products / services
13 Value added statement	27 Workers social report
14 Return on capital employed	28 Advertising Expenditures: information and amount

Table 5. Sample of SBF 120 Index firms

SBF 120 firms	120
Companies are not present in the index during the entire study period	- 46
Financial and insurance companies	- 4
Lack of information (not available annual report or reference document)	- 5
Final sample	65

Table 6 : Voluntary disclosure score- Summary statistics

(Number of items between 0 and 28, 62 firms)

Score 2003	Average	Standard deviation	Minimum	Maximum
Nb of items	16.2	2.81	09	26
Score 2004				
Nb of items	16.6	2.68	10	27
Score 2005				
Nb of items	17.4	2.48	13	28
Score 2006				
Nb of items	17.7	2.47	12	28
Score 2007				
Nb of items	17.2	1.94	11	21

Table 7 – List of variables

Variables	*Definition*	**Comment**
SCORE	Financial voluntary publication score	Estimated by the number of items of voluntary disclosed information in the annual report ot the year t by the firm i. (Between 0 and 28)
COMDUM	Communicant firms	Dummy variables for highly communicanat firms. Firms with a publication score above the median value (1); Non communicant are below the median
SCORExCOMDUM	Interaction term	Cross product of SCORE and COMDUM
DISP	Dispersion of earning forecasts	Standard deviation of analysts' forecasts of earning per share. (IBES)
RISK	Market risk indicator	Average monthly beta coefficients (Datastream)
INSTOWN	Institutional investors' ownership	Equity share of capital held by institutional investors (Datastream)
ANALYSTS	Number of analysts following the firm	Number of analysts providing an earning forecast. (IBES)
ACCUR	Forecast accuracy	Average of errors between forecasted and realized earnings by analysts (IBES)
CAC	Firm belonging toe the top tier CAC 40 stock Index	Dummy variable (1 if belongs to the CAC index)
SIZE	Size of teh firm	Log of total assets (Datastream)
TOP3	Share ownership concentration	Sum of the equity stake of the three first shareholders (Datastream)
LEVERAGE	Debt leverage	Ratio of total debt to total assets (Datasteram)
IFRS	Introduction of IFRS standards	Dummy variable (0 in 2003-2004; 1 in

		2005-2007)
TREND	Time trend	1 to 5 for each year on the 2003-2007 period

Table 8 Descriptive statistics

Variables	*N*	*Mean*	*Standard deviation*	*Min*	**Max**
SCORE	310	17.00	2.58	9	28
DISP	303	0.27	0.30	0.01	2.12
RISK	310	1.19	0.77	0.04	4.36
INSTOWN	310	10.53	7.28	0.37	54.32
ANALYSTS	310	19.74	6.55	9	38
ACCUR	310	0.09	1.94	-13.84	15.81
CAC	310	0.40	0.49	0	1
SIZE	310	3.93	0.65	2.40	5.21
TOP3	307	35.81	21.23	2.56	87.09
LEVERAGE	310	26.49	13.03	0.46	61.32
TREND	310	3	1.41	1	5

Table 9 Existence of a time dimension effect in the score variable
(Ordered Logit dependant variable; variables see table 7; ***: significant at the 1% level,***: at the 5% level, *:at the 10% level)

Dependant is Score - Ordered Logit model of dependant							
variable		coefficient	p-value	variable		coefficient	p-values
Constant		8.2792	0.00***	Constant		8.4508	0.00***
DISP		-1.0815	0.02**	DISP		-1.0421	0.02**
SIZE		0.3665	0.20	SIZE		0.4527	0.11
ANALYSTS		0.0272	0.30	ANALYSTS		0.0195	0.46
LEVERAGE		0.0197	0.03**	LEVERAGE		0.0176	0.06*
INSTOWN		-0.0109	0.52	INSTOWN		-0.0058	0.72
TOP3		-0.0055	0.36	TOP3		-0.0044	0.46
ACCUR		0.0587	0.33	ACCUR		0.0697	0.24
RISK		-0.4751	0.00***	RISK		-0.4597	0.00***
TREND		0.3508	0.00***				
				IFRS		1.0478	0.00***
LR test		89.79	0.00***	LR test		91.24	0.00***
N		301		N		301	
pseudo R2		0.27		pseudo R2		0.27	

Table 10 Individual and time effect

SCORE Publication score Variable	F	p-value
individual firm's effect	8,43	0,00***
Time effect	4,41	0,00***

DISP Analysts' dispersion Variable		
Individual firm effect	5,56	0,00***
Time effect	1,34	0,25

Table 11 Determinants of the score publication index)
(Panel analysis; dependant is SCORE; random effect except M8 with fixed effect; variables: see table 7; ***: significant at the 1% level,***: at the 5% level, *:at the 10% level)

Random effect									
Variables	M1	M2	M3	M4	M5	M6	M7	M8	M8-fixed
Constant	10.9476***	11.4613***	11.0510***	10.6483***	8.9834***	15.9756***	10.1772***	10.5084***	
DISP	-0.1647	-0.2383							
SIZE	-0.3184	-0.3363	-0.3766	-0.4027		-0.0821	-0.2859	-0.3948	-1.7438
LEVERAGE	-0.0300*	-0.0313**	0.0272*	0.0262*	0.0270**	0.0275*	0.0287**	0.0256*	0.0313*
TREND	0.0219		0.0568						
SCORE(-1)	0.4239***	0.3971***	0.3910***	0.4054***	0.4396***		0.4081***	0.4033***	0.1633*
CAC	0.7964	1.0099*	0.8911	0.9395*		1.0046*	0.9168*	0.9191*	0.9453
NBANAL	-0.0045	-0.0248							
INSTOWN	-0.0276	-0.025	-0.0215	-0.0158					
TOP3	-0.0043	-0.0039							
ACCUR	-0.0571	-0.0311	-0.0129	0.014					
VOLAT	-0.1829	-0.2066							
IFRS		0.4862*		0.5434**	0.3911*	0.8892***	0.4627*	0.5467**	0.9244***
DISP(-1)					-0.7126	-0.673	-0.7278		
Adj R2	0.69	0.71	0.69	0.69	0.69	0.70	0.70	0.70	0.77

Table 12 Determinants of the analysts' forecasts dispersion
(Panel data analysis, dependant is DISP; random effect and fixed effect; variables: see table 7; ***: significant at the 1% level,***: at the 5% level, *:at the 10% level)

DISP analysis random and fixed effect									
Equation	M1	M2	M3	M4	M5	M6	M7	M8	M8
	random	random	fixed	fixed	fixed	fixed	random	random	fixed
Constant	-0.7931**	0.1301					0.6467**	0.9917***	
SCORE(-1)	0.0098	0.0093					0.0068		
COMDUM	-0.0734*	-0.0827**			-0.0663*				
SIZE	0.2672***		0.4746***	0.4268***	0.4296***	0.4017***	0.2517***	0.2530***	0.5590***
NBANAL	-0.0184***	-0.0106**	-0.0123**	-0.0134***	0.0133***	-0.0121**	0.0161***	-0.0188***	-0.0161**
CAC	0.0947	0.1713**	0.2010**	0.1993**	0.2008**			0.1237	0.2468**
RISK	0.0461							0.0479	0.0616
LEVERAGE		0.0064***	0.0074***	0.0079***	0.0079***	0.0073***	0.0048**	0.0055***	0.006**
SCORE			0.0284**			0.0031		0.0204*	0.0284**
SCORE*COMDUM			-0.0075***	-0.0034*			-0.0034	-0.0078***	-0.0087***
IFRS			0.0255					0.0397	-0.0091
DISP(-1)							0.1246*	0.0761	-0.179
Adj R2	0.66	0.63	0.55	0.54	0.54	0.53	0.64	0.66	0.56
df	235	237	234	236	236	237	234	231	171

Table 13
(Two equation simultaneous model, panel analysis with random effects; variables: see table 7; ***: significant at the 1% level,***: at the 5% level, *:at the 10% level)

Dependant SCORE			Dependant DISP		
Variables	Coefficient	p-value	Variables	Coefficient	p-value
Constant	5.1717	0.00***	Constant	-0.4220	0.03**
SCORE(-1)	0.6796	0.00***	SIZE	0.1728	0.00***
LEVERAGE	0.0087	0.27	NBANAL	-0.0130	0.00***
IFRS	0.1399	0.56	CAC	-0.0094	0.84
CAC	0.4802	0.02**	LEVERAGE	0.0016	0.21
			SCORE	0.0083	0.40
			SCORE*COMDUM	-0.0053	0.04**
			DISP(-1)	0.5133	0.00***
Adj R2	0.6000		Adj R2	0.4200	
df	236		df	233	
DW	2.1000		DW	2.2000	

Figure 1. Average voluntary disclosure score over the 2003-2007 period.